Gas Analyser Interface

The interface between the scanner and the gas analyser is available between Gas analyzer and ULTRASCAN P1 scanner. HOST-PRO PC interface program is also necessary to add the real-time PC interface features.

This chapter of the manual explains the operation of scanner side for the interface.

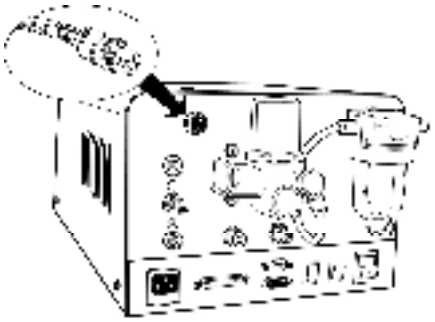
Carefully read the manual for the gas analyser that is separately provided to become familiar with the operation of the gas analyser before using the interface functions.

I. Set up ----------

A. Power supply

a Refer to Gas analyser manual when using the analyser alone without interfacing with the scanner.
This chapter explains the operation when the gas analyser is used in the vehicle interfaced with the scanner.

b Connect the cigarette lighter power cable to the cigarette lighter socket. And connect the other end to the 3-pin power socket in the rear panel of the gas analyser



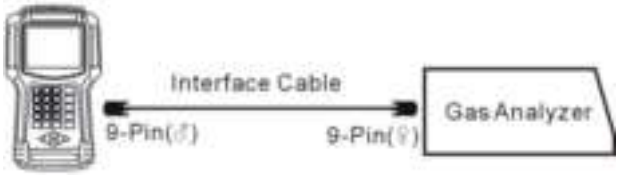
c Gas analyser begins to warm-up when power is supplied. Warming up takes 4 to 6 minutes in normal condition. It may take up to 15 minutes when it is cold and it is dependent to the actual air temperature.

B. Cabling

1. Scanner – Gas analyser interface

a Connect the 9-pin male connector of the gas analyser interface cable to ULTRASCAN P1 RS232 adapter(9-pin female).

b Connect the 9-pin female connector to the gas analyser.

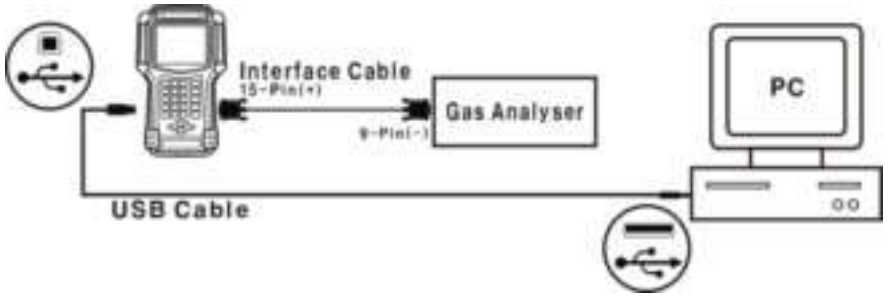


2. Adding PC to the network

a Using HOST-PRO real-time PC interface, you can connect ULTRASCAN P1 with your PC maintaining the interface between the scanner and the gas analyser.

b Connect the 15-pin female connector of the split cable to HOST-PRO USB module 15-pin male connector.

c Connect the USB cable to the PC

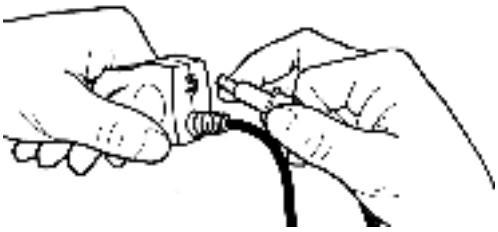


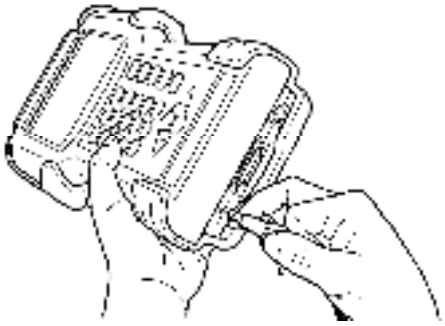
d HOST-PRO is scheduled to be supplied free of charge for ULTRASCAN P1.

If a printer is installed to the PC, you can print out the measurements with the printer regardless of brand name, model and supported print mode.

C. Power supply

Connect one end of the secondary power cable that is supplied with the gas analyser to the auxiliary power socket of cigarette lighter plug, and the other end to ULTRASCAN P1.





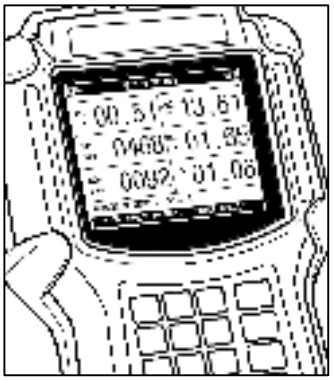
II. Operation ----------

There are two ways you can get the gas readings using scanner interface:

a Remote control mode

ULTRASCAN P1 works as a remote control console for the IM2400 gas analyzer.

All screenplays of the gas analyzer are transferred to ULTRASCAN P1 and you can control the operation of the gas analyzer with the scanner.



b Data Stream mode

ULTRASCAN P1 works as a data receiver.

Gas readings are provided as a part of data stream. You can view both of scanner data stream information and gas measurements at the same time with ULTRASCAN P1.

ULTRASCAN P1 must be communicating with both vehicle control module and the gas analyzer at the same time.

In either mode, IM2400 gas analyzer ceases to display gas readings on its LCD and shows the message saying “Communicating with scanner”.

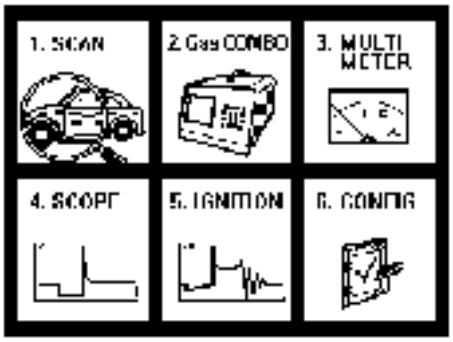
You have to set the gas analyzer to be ready for scanner interface by selecting [Scanner communication mode] after pressing the [MENU] key of the gas analyzer before initiating ULTRASCAN P1 & IM2400 gas analyzer interface function. Refer to the gas analyzer manual for further information.

A. Remote control mode

Basically, all the functions and screenplays are the same as when using the gas analyzer as stand-alone equipment. You can simply regard that the front control panel of the gas analyzer has transformed to ULTRASCAN P1.

1. Menu selection

a Turn on ULTRASCAN P1 by pressing the [POWER] key.
And select [2. Gas COMBO] by pressing the [2] key at the initial menu.



2. Operation

The ULTRASCAN P1 scanner becomes the remote control console of theIM2400 Gas Analyzer. You can read the gas readings on the scanner LCD and control overall operation of the gas analyzer.
Refer to the separate gas analyzer manual for detailed functions.

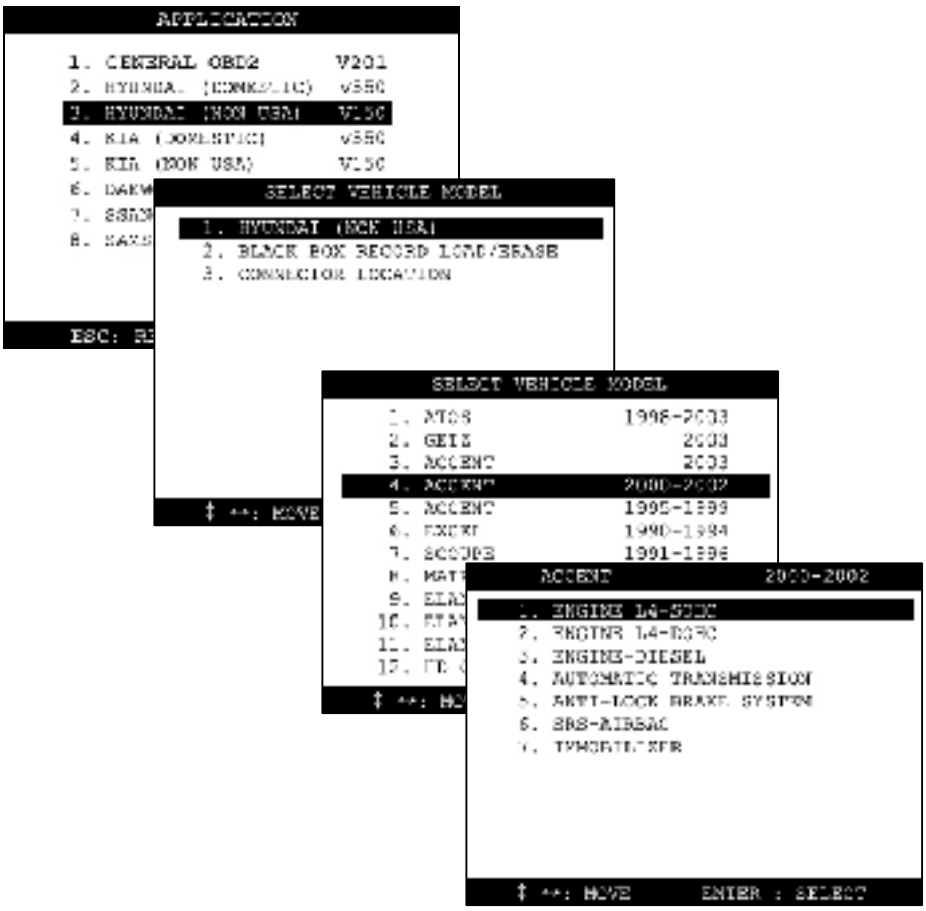
B. Data Stream Mode

ULTRASCAN P1 works as a data receiver.

Gas readings are provided as a part of data stream. You can view both of scanner diagnostic data and gas measurements at the same time with ULTRASCAN P1. Gas readings are listed in the last part of the scanner data stream

1. Usual scanner menu selection

a. Select a specific model name and system you want to test as usual.
The procedure is the same as using ULTRASCAN P1 separately.



b. With or without gas readings

When you select [Service Data (=data stream, live data)] from the function menu, following query follows when the gas analyzer is interfaced with ULTRASCAN P1. In case these two machines are not interfaced, ULTRASCAN P1 will skip this menu selecting procedure.

c SERVICE DATA + GAS DATA

Select this to view the gas readings together with conventional scanner data through ULTRASCAN P1 and IM2400 Gas analyzer interface.

d SERVICE DATA only

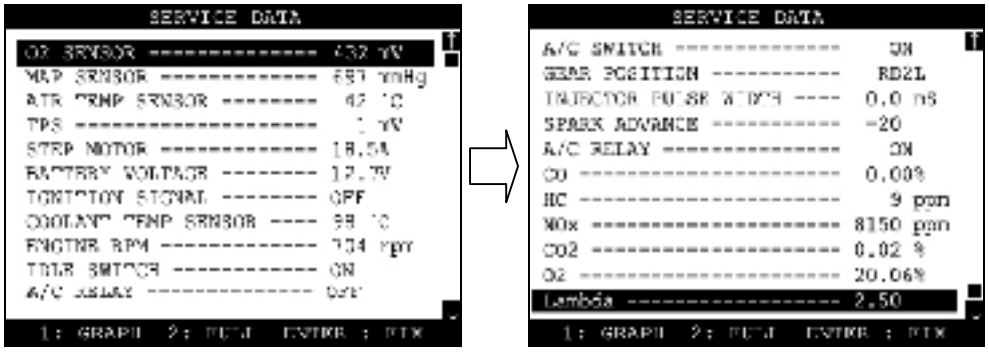
Activates usual scanner operation and only data stream without gas analyzer readings is provided

Make sure that the test vehicle supports serial communication that provides data stream. Scanner – Gas analyzer interface is not available for the old cars that do not provide serial data.

2. Data stream with gas readings

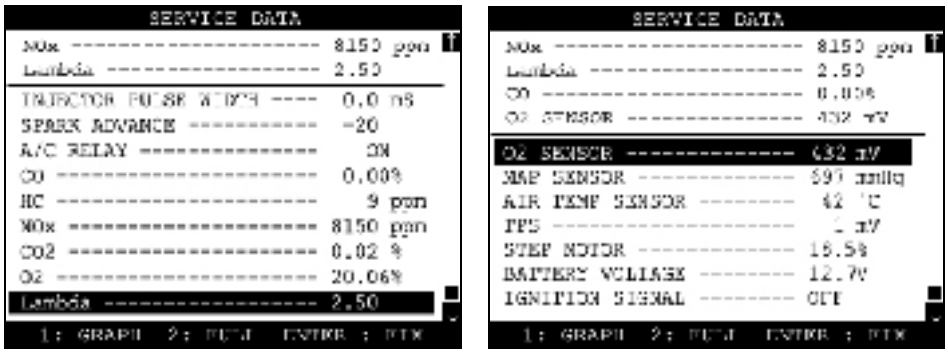
a Gas readings are available only when the gas analyzer is properly interfaced with ULTRASCAN P1 and ready for data transmission. Refer to the IM2400 gas analyzer manual for further information.

b You can find the gas readings in the end of data listing.
Use [▲] and [▼] keys to scroll up and down, or [◀] or [▶] for page up/down.

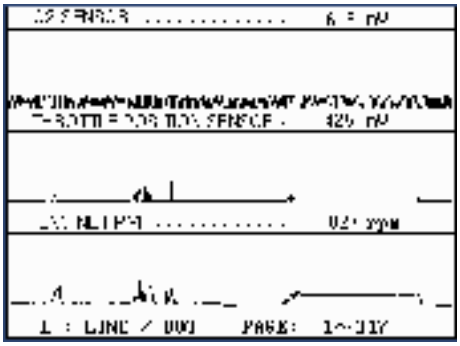


3. Data Freeze / Graph

a. You can place up to 5 sensor or gas readings on the top of the screen by pressing the [ENTER] key after locating the highlighted bar on the item. The selected items remain in the top of the screen while you are scrolling up and down the screen to view other data readings.



b. You can select up to 3 items in the same way and view the readings in graphic form by selecting [1. Graph] during the data stream display.



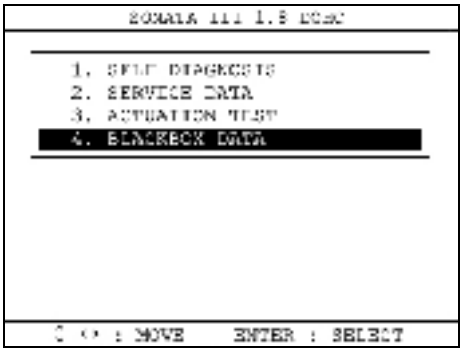
c. Refer to [Chapter 4. Functions] for further information.

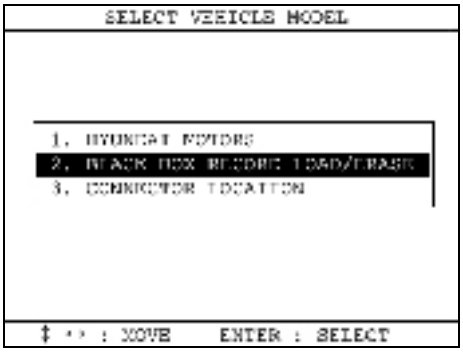
4. Black Box Record

a. You can download both of scanner data and gas readings to ULTRASCAN P1 memory using this function. Black box function of ULTRASCAN P1 scanner works the same in the IM2400 gas analyzer interface mode, too. Refer to [Chapter 4. Functions] for further information.

b. To record data stream and gas readings together, select [Blackbox Data] from the function menu after selecting a system to test.

c. Select [Blackbox record load/erase] after the car make selection menu to reload or erase the saved blackbox data.





5. Host-Pro

a. By utilizing HOST-PRO realtime PC interface, you can view the live data stream and gas readings on your PC screen. You can also replay the saved balckbox data.

b. Refer to the separate HOST-PRO manual for further information of the functions and features